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SHORTER NOTES

Gametophytes of *Equisetum giganteum*.—In a recent article, Duckett and Pang (*J. Linn. Soc., Bot.* 88:11-34, 1984) claimed that sexual behavior of *Equisetum giganteum* L. was similar to that of the other species of *Equisetum* subg. *Hippochaete*, with homosporous spores producing either antheridial or archegonial gametophytes. The archegonial gametophytes as they age begin to produce antheridial lobes and eventually cease archegonial production. The antheridial gametophytes remain so, or with age and by lamellar proliferation also produce archegonial branches. I had earlier described *E. giganteum* gametophytes as different from those of any other species because they were normally bisexual, that is, simultaneously hermaphroditic, with both gametangia being borne upon the same meristem, rather than having separate antheridial lobes as the sequentially hermaphroditic species do (Hauke, *Beih. Nova Hedwigia* 8:1-123, 1963; *Bull. Torrey Bot. Club* 96:568-577, 1969). On this basis I had classified *E. giganteum* as a distinct section *Incunabula*, and theorized on evolution of heterothallism in *Equisetum*.

Duckett and Pang speculated that my culturing procedure, using mass cultures, resulted in a very rapid shift from female to male, which I then interpreted as simultaneous hermaphroditism, rather than rapid sequential hermaphroditism. They cited a plant in cultivation in the Botanic Gardens, Edinburgh as the source of the spores from which they grew their *Equisetum* gametophytes. I wrote to the Botanic Gardens at Edinburgh requesting a specimen from the plant in question. Dr. C. N. Page was gracious enough to send me a fine specimen of that plant, and noted that it was originally collected in Mexico. Although it is superficially much like *E. giganteum*, the Edinburgh plant is *E. myriochaetum* Schlecht. and Cham. That species has stomata in a single line on each side of the internodal grooves, rather than rows 2 to 4 stomata wide. The branch ridges viewed in profile show a sawtooth pattern rather than a blocky pattern. The stem sheath segments are flattened and green, rather than rounded and light brown. So far as I have seen, all large branched *Equisetum* collections from Mexico are either *E. myriochaetum* or the hybrid *E. × schaffneri*, and *E. giganteum* does not occur in that country.

As *E. myriochaetum* rather than *E. giganteum*, the gametophytes described by Duckett and Pang are in agreement with my (1969) descriptions of that species, and their challenge to my classifications of *Equisetum* subg. *Hippochaete* and my hypothesis of evolution of heterothallism in the genus *Equisetum* is not supported.—RICHARD L. HAUKE Department of Botany, University of Rhode Island, Kingston, RI 02881.